

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1-20. (canceled)

21. (currently amended) An information record medium on which there are recorded:

a series of content information which is constructed from at least one elementary stream and which is stored as a plurality of packets, each of the plurality of packets stores a fragment of the elementary stream;

menu information, which is constructed from at least one elementary stream and which is stored in the plurality of packets, for displaying at least one menu-button ~~a menu screen~~ of which is to be superimposed on a display-screen of said content information during reproduction of said content information; ~~and~~

play list information for defining reproduction sequence of said content information by a unit of item, which constitutes said content information and which is accessible upon reproducing; and

object information for indicating a relationship between packets and the elementary stream of each of the content information and the menu information,

said play list information including: item information for specifying each item which constitutes said content information by indicating both of a reproduction start time and a reproduction end time of the item; and slave item information for specifying said menu information as a slave item ~~by indicating both of a reproduction start time and a reproduction end time of the slave item,~~

wherein the item information includes information related to the slave item information, and

the menu information includes information for indicating a number of the menu-button which is displayed on a display-screen~~wherein said menu information includes information for displaying a button which is displayed in the menu screen.~~

22. (previously presented) The information record medium according to claim 21, wherein said menu information is displayed with being superimposed on or in place of one portion of said content information or is not displayed at all.

23. (previously presented) The information record medium according to claim 21, wherein said menu information specified by the slave item information is further recorded in said play list information, as common information commonly used by a plurality of slave items.

24. (previously presented) The information record medium according to claim 21, on which there is further recorded reproduction control information for controlling such that said menu information specified by the slave item information is displayed with being superimposed on or in place of one portion of said content information corresponding to said menu information specified by the slave item information or is not displayed at all.

25. (currently amended) An information record apparatus, comprising:

a first record device for recording a series of content information which is constructed from at least one elementary stream and which is stored as a plurality of packets, each of the plurality of packets stores a fragment of the elementary stream and menu information, which is constructed from at least one elementary stream and which is stored in the plurality of packets, for displaying at least one menu-button ~~a menu-screen~~ of which is to be superimposed on a display-screen of said content information during reproduction of said content information; and

a second record device for recording play list information for defining reproduction sequence of said content information by a unit of item, which constitutes said content information and which is accessible upon reproducing; and

a third record device for recording object information for indicating a relationship between packets and the elementary stream of each of the content information and the menu information,

said second record device recording said play list information such that said play list information includes: item information for specifying each item which constitutes said content information by indicating both of a reproduction start time and a reproduction end time of the item; and slave item information for specifying said menu information as a slave item ~~by indicating both of a reproduction start time and a reproduction end time of the slave item,~~

wherein the item information includes information related to the slave item information, and

the menu information includes information for indicating a number of the menu-button which is displayed on a display-screen~~wherein said menu information includes information for displaying a button which is displayed in the menu screen.~~

26. (currently amended) An information record method, comprising:

a first record process of recording a series of content information which is constructed from at least one elementary stream and which is stored as a plurality of packets, each of the plurality of packets stores a fragment of the elementary stream and menu information, which is constructed from at least one elementary stream and which is stored in the plurality of packets, for displaying at least one menu-button a menu screen which is to be superimposed on a display screen of said content information during reproduction of said content information;~~and~~

a second record process of recording play list information for defining reproduction sequence of said content information by a unit of item, which constitutes said content information and which is accessible upon reproducing; and

a third record process of object information for indicating a relationship between packets and the elementary stream of each of the content information and the menu information,

said second record process recording said play list information such that said play list information includes: item information for specifying each item which constitutes said content information by indicating both of a reproduction start time and a reproduction end time of the item; and slave item information for specifying said menu information as a slave item ~~by indicating both of a reproduction start time and a reproduction end time of the slave item,~~

wherein the item information includes information related to the slave item information, and
the menu information includes information for indicating a number of the menu-button which is displayed on a display-screen~~wherein said menu information includes information for displaying a button which is displayed in the menu screen.~~

27. (currently amended) An information reproduction apparatus for reproducing said information record medium according to claim 21, said information reproduction apparatus comprising:

a reproduction device capable of reproducing said content information, said menu information, ~~and~~ said play list information and said object information;

a displaying and outputting device capable of displaying and outputting said content information and said menu information; and

a control device for controlling said reproduction device to reproduce said content information and said menu information, in accordance with the item information and the slave item information included in said play list information and said object information reproduced by said reproducing device.

28. (previously presented) The information reproduction apparatus according to claim 27, further comprising a buffer memory for maintaining said reproduced menu information in a readily displayable and outputtable condition, for a predetermined period, regardless of whether or not said reproduced menu information is displayed and outputted by said displaying and outputting device.

29. (currently amended) An information reproduction method of reproducing said information record medium according to claim 21 on an information reproduction apparatus comprising: (i) a reproduction device capable of reproducing said content information, said menu information, ~~and~~ and said play list information and said object information; and (ii) a displaying and outputting device capable of displaying and outputting said content information and said menu information,

said information reproduction method comprising:

a first control process of controlling said reproducing device to reproduce said play list information and said object information; and

a second control process of controlling said reproducing device to reproduce said content information and said menu information, in accordance with the item information and the slave item information included in said play list information and said object information reproduced by said reproducing device.

30. (currently amended) An information record reproduction apparatus, comprising:

a first record device for recording a series of content information which is constructed from at least one elementary stream and which is stored as a plurality of packets, each of the plurality of packets stores a fragment of the elementary stream and menu information, which is constructed from at least one elementary stream and which is stored in the plurality of packets, for displaying at least one menu-button ~~a menu screen~~ which is to be superimposed on a display-screen of said content information during reproduction of said content information;

a second record device for recording play list information for defining reproduction sequence of said content information by a unit of item, which constitutes said content information and which is accessible upon reproducing; and

a third record device for recording object information for indicating a relationship between packets and the elementary stream of each of the content information and the menu information,

said second record device recording said play list information such that said play list information includes: item information for specifying each item which constitutes said content information by indicating both of a reproduction start time and a reproduction end time of the item; and slave item information for specifying said menu information as a slave item ~~by indicating both of a reproduction start time and a reproduction end time of the slave item,~~

wherein the item information includes information related to the slave item information, and

the menu information includes information for indicating a number of the menu-button which is displayed on a display-screen,

~~wherein said menu information includes information for displaying a button which is displayed in the menu screen;~~

said information record reproduction apparatus further comprising:

a reproduction device capable of reproducing said content information, said menu information, ~~and~~ said play list information and said object information;

a displaying and outputting device capable of displaying and outputting said content information and said menu information; and

a control device for controlling said reproduction device to reproduce said content information and said menu information, in accordance with the item information and the slave item information included in said play list information and said object information reproduced by said reproducing device.

31. (currently amended) An information record reproduction method on an information reproduction apparatus comprising: (i) a reproduction device capable of reproducing content information, menu information, ~~and~~ and object information; and (ii) a displaying and outputting device capable of displaying and outputting said content information and said menu information,

said information record reproduction method comprising:

a first record process of recording a series of content information which is constructed from at least one elementary stream and which is stored as a plurality of packets, each of the plurality of packets stores a fragment of the elementary stream and menu information, which is constructed from at least one elementary stream and which is stored in the plurality of packets, for displaying at least one menu-button ~~a menu screen~~ which is to be superimposed on a display-screen of said content information during reproduction of said content information;

a second record process of recording play list information for defining reproduction sequence of said content information by a unit of item, which constitutes said content information and which is accessible upon reproducing; and

a third record process of object information for indicating a relationship between packets and the elementary stream of each of the content information and the menu information,

said second record process recording said play list information such that said play list information includes: item information for specifying each item which constitutes said content information by indicating both of a reproduction start time and a reproduction end time of the item; and slave item information for specifying said menu information as a slave item ~~by indicating both of a reproduction start time and a reproduction end time of the slave item,~~

wherein the item information includes information related to the slave item information, and

the menu information includes information for indicating a number of the menu-button which is displayed on a display-screen~~wherein said menu information includes information for displaying a button which is displayed in the menu screen,~~
and

said information record reproduction method further comprising:

a first control process of controlling said reproducing device to reproduce said content information and said menu information, in accordance with the item information and the slave item information included in said play list information and said object information reproduced by said reproducing device.

32. (currently amended) A computer-readable recording medium recording thereon a computer program for a record control to control a computer disposed at the information record apparatus according to claim 25, said program making the computer function as at least a part of the first record device, ~~and~~ the second record device and the third record device.

33. (previously presented) A computer-readable recording medium recording thereon a computer program for a reproduction control to control a computer disposed at the information reproduction apparatus according to claim 27, said program making the computer function as at least a part of the reproduction device, the displaying and outputting device and the control device.

34. (currently amended) A computer-readable recording medium recording thereon a computer program for a record reproduction control to control a computer disposed at the information record reproduction apparatus according to claim 31, said program making the computer function as at least a part of the first record device, the second record device, the third record device, the reproduction device, the displaying and outputting device and the control device.

35. (currently amended) A computer-readable recording medium recording thereon a data structure including a control signal, comprising

a series of content information which is constructed from at least one elementary stream and which is stored as a plurality of packets, each of the plurality of packets stores a fragment of the elementary stream;

menu information, which is constructed from at least one elementary stream and which is stored in the plurality of packets, for displaying at least one menu-button a menu-screen which is to be superimposed on a display-screen of said content information during reproduction of said content information;~~and~~

play list information for defining reproduction sequence of said content information by a unit of item, which constitutes said content information and which is accessible upon reproducing; and

object information for indicating a relationship between packets and the elementary stream of each of the content information and the menu information,

said play list information including: item information for specifying each item which constitutes said content information by indicating both of a reproduction start time and a reproduction end time of the item; and slave item information for specifying said menu information as a slave item ~~by indicating both of a reproduction start time and a reproduction end time of the slave item,~~

wherein the item information includes information related to the slave item information, and

the menu information includes information for indicating a number of the menu-button which is displayed on a display-screen~~wherein said menu information includes information for displaying a button which is displayed in the menu screen.~~